



An Innovative Communication Approach to Encourage Wildfire Risk Mitigation

Patty Champ
Research Economist
Human Dimensions Program
Rocky Mountain Research Station



The Wildfire Research (WiRē) Team

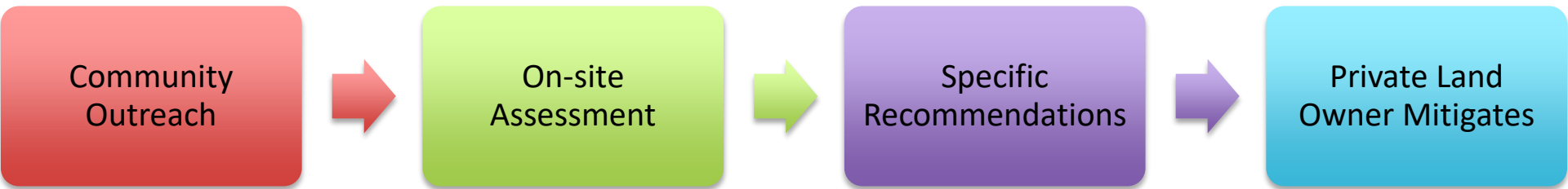
Our unique approach unites research and practice, collecting and using community-specific data to tailor programs that support local solutions, allowing communities to get in front of the problem.



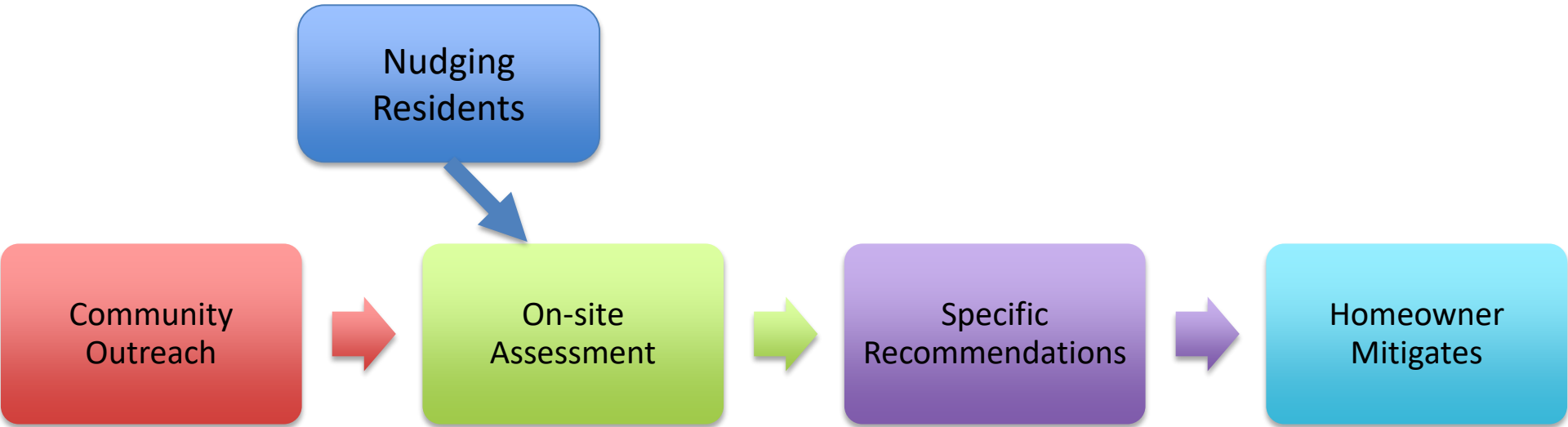
wildfireresearchcenter.org



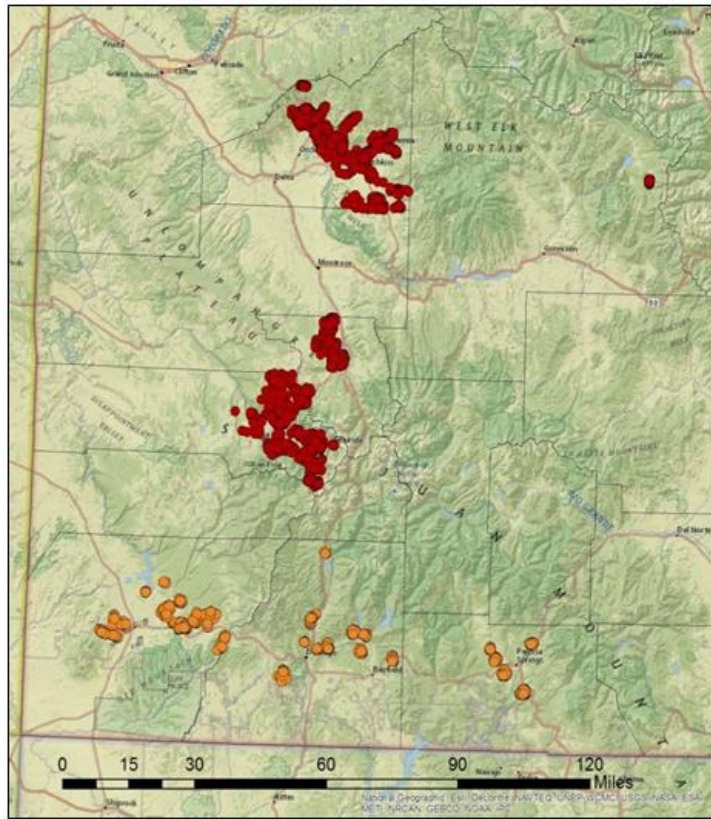
Wildfire Risk Mitigation Process on Private Land Parcels (Simplified)



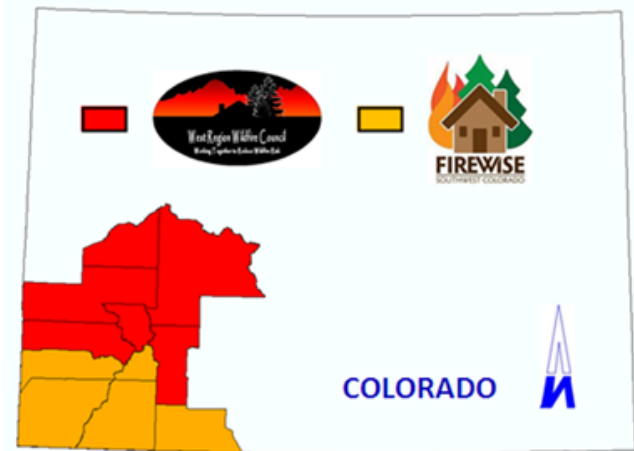
Wildfire Risk Mitigation Process on Private Land Parcels (Simplified)



Cornerstone of WiRē approach: paired, parcel-level data



- ✧ Rapid wildfire risk assessment
- ✧ Household survey



**All data are collected and owned by practitioner stakeholders*

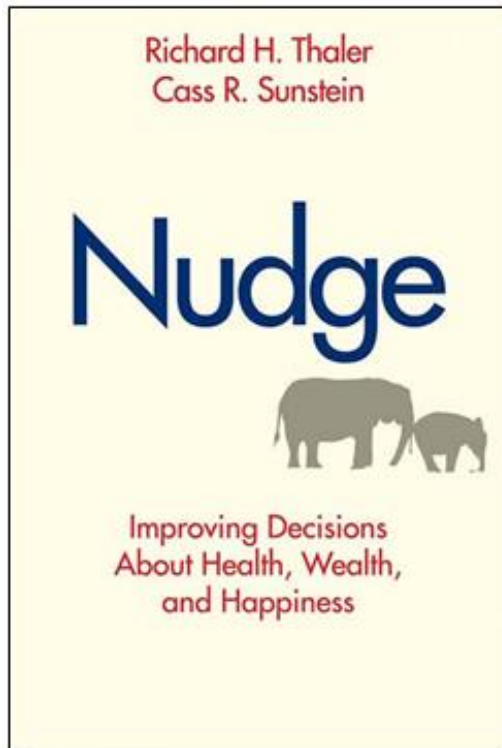
Rapid Wildfire Risk Assessment

CATEGORY	OBSERVED CONDITION	POINTS
Distance to Dangerous Topography	Greater than 150'	0
	Between 50' - 150'	30
	Less than 50'	75
Slope	Less than 20%	0
	Between 20% - 45%	20
	Greater than 45%	40
Background Fuels	Light	25
	Moderate	50
	Heavy	75
Defensible Space	Greater than 150'	0
	Between 30' - 150'	50
	Between 10' - 30'	75
	Less than 10'	100
Other Combustibles	None/Greater than 30' from structure	0
	Between 10' - 30' from structure	10
	Less than 10' from structure	30

CATEGORY	OBSERVED CONDITION	POINTS
Roofing Material	Class A	0
	Class B or Class C	200
Building Exterior	Non-Combustible	0
	Log, Heavy Timbers	20
	Wood, Vinyl	60
Decks & Fencing	None	0
	Non-Combustible Deck/Fence attached to Structure	20
	Combustible Deck/Fence attached to Structure	50
Address Visible	Posted and Reflective	0
	Posted, NOT Reflective	5
	Not Visible from the Road	15
Ingress / Egress	Two or More Roads In/Out	0
	One Road In/Out	10
Driveway Clearance	Greater than 24'	0
	Between 20' - 24'	5
	Less than 20'	10

Overall Rating	Min	Max
Low	25	150
Moderate	151	175
High	176	270
Very High	271	365
Extreme	366	665

Nudge Experiment



 **Working Together to Reduce Wildfire Risk** 

Updated Full Name: _____
Updated Address 1: _____
Updated Address 2a, 2b, 2c: _____

Spring 2017

Dear Telluride Fire Protection District Resident,

We have recently seen the devastating effects of wildfire in Colorado communities. The Telluride Fire Protection District and the West Region Wildfire Council (WRWC) do not want to see homes destroyed by a wildfire in San Miguel County. We know how important it is for all of us to *work together to reduce our risk from wildfire*.

In 2014, we completed a study of wildfire risk, which we refer to as a Rapid Wildfire Risk Assessment. The assessment was conducted for all residences within the fire district (excluding certain municipal and agricultural areas). This is what we found about the wildfire risk in your area:

Your own property's wildfire risk rating is: _____ [own property rating]

Your community's overall wildfire risk is rated as: _____ [community rating]

The average wildfire risk rating of your ten closest neighbors: _____ [neighbor rating]

LOW **MODERATE** **HIGH** **VERY HIGH** **EXTREME**

You can learn more about your wildfire risk rating by visiting: www.COwildfire.org/myhome

Type in your personal access code: _____

To learn more about our organization's programs, such as available incentive funding to share the cost for creating defensible space around your home, community scale curb-side chipping and to schedule a site visit, please contact Jamie Gomez, Mitigation & Education Coordinator at (970) 615-7300 and visit our website: www.COwildfire.org

Sincerely,

Jamie Gomez
Mitigation & Education Coordinator
West Region Wildfire Council


John Bennett
District Chief
Telluride Fire Protection District

Your own property's wildfire risk rating is: [own property rating]

Your community's overall wildfire risk is rated as: [community rating]

The average wildfire risk rating of your ten closest neighbors: [neighbor rating]

LOW **MODERATE** **HIGH** **VERY HIGH** **EXTREME**

Websites allow for tracking a behavioral outcome.

Personalized information increases relevancy.

To view an example of our personalized wildfire risk assessment websites, go to:

www.COwildfire.org/myhome

In the ID box, use: **TEST01**

www.cowildfire.org/myhome

www.cowildfire.org/myhome/parcel.php

West Region Wildfire Council
Working Together to Reduce Wildfire Risk

Home About Us Mitigation Take Action

Welcome to *your* Rapid Wildfire Risk Assessment

In 2013, the West Region Wildfire Council (WRWC) conducted a Rapid Wildfire Risk Assessment of every Wildland Urban Interface (WUI) dwelling within your fire district. This page shows results for:

**21932 2225 RD
CEDAREGE, CO**

Properties were assessed from public roads and/or driveways. Each home was assessed in eleven categories, organized by theme:

- Background Risk Factors
- Home Hardening
- Defensible Space
- Emergency Access

Results shown are specific to your home and property. Photos are for general information only and do not show your specific property. A summary of the cumulative risk factors is shown at the bottom of this page, followed by contacts for information on taking action to reduce your wildfire risk.

38°58'22.4"N 107°56'45.0"W
View larger map

21932 RD

2225 RD

©2016 Google - Map Data Terms

THEME A: Background Risk Factors

Background fuels	Light	Moderate	High
	Consists mainly of grasses and/or fuels less available to fire.	Consists mainly of light brush and/or isolated trees that are available to fire. Fuel loading and distribution will moderately contribute to extreme wildfire behavior.	Consists mainly of dense brush and/or trees that are available to fire. Fuel loading and distribution will contribute to extreme wildfire behavior.
Your property's rating:			

Distance to dangerous topography

The proximity of a home to certain topographic features may significantly impact a home's survivability during a wildfire. Such features include over-chimneys, drainages, gullies, narrow canyons, ridges, etc. These features where wildfires can move quickly, increase in wildfire intensity and behavior. This is an approximate measure of the proximity of your home to such topographic features.

More than 24' of horizontal clearance and 15' of vertical clearance.

Between 20' and 24' of horizontal clearance and more than 15' of vertical clearance.

Less than 20' of horizontal clearance and 15' of vertical clearance.

Your property's rating:

Rapid Wildfire Risk Assessment Summary

Each criterion in the wildfire risk assessment has an attached 'score' that corresponds directly with the elements potential to compromise a structure during a wildfire event. In other words, elements that make a structure significantly more vulnerable to wildfire are given more weight when considering the overall wildfire risk. Roofing assembly, proximity to dangerous topography, and defensible space are given the heaviest weighting. However, each theme and individual category, listed above, represent a significant and standalone wildfire risk factor for your home and property. Your property's wildfire risk rating, at the time that the Rapid Wildfire Risk Assessment was conducted, is identified below.

Last Update: 2013	LOW	MODERATE	HIGH	VERY HIGH	EXTREME
Your property's rating:					

For more information

Jamie Gomez
Mitigation and Education Coordinator
West Region Wildfire Council
www.coordinator@gmail.com
970-615-7300

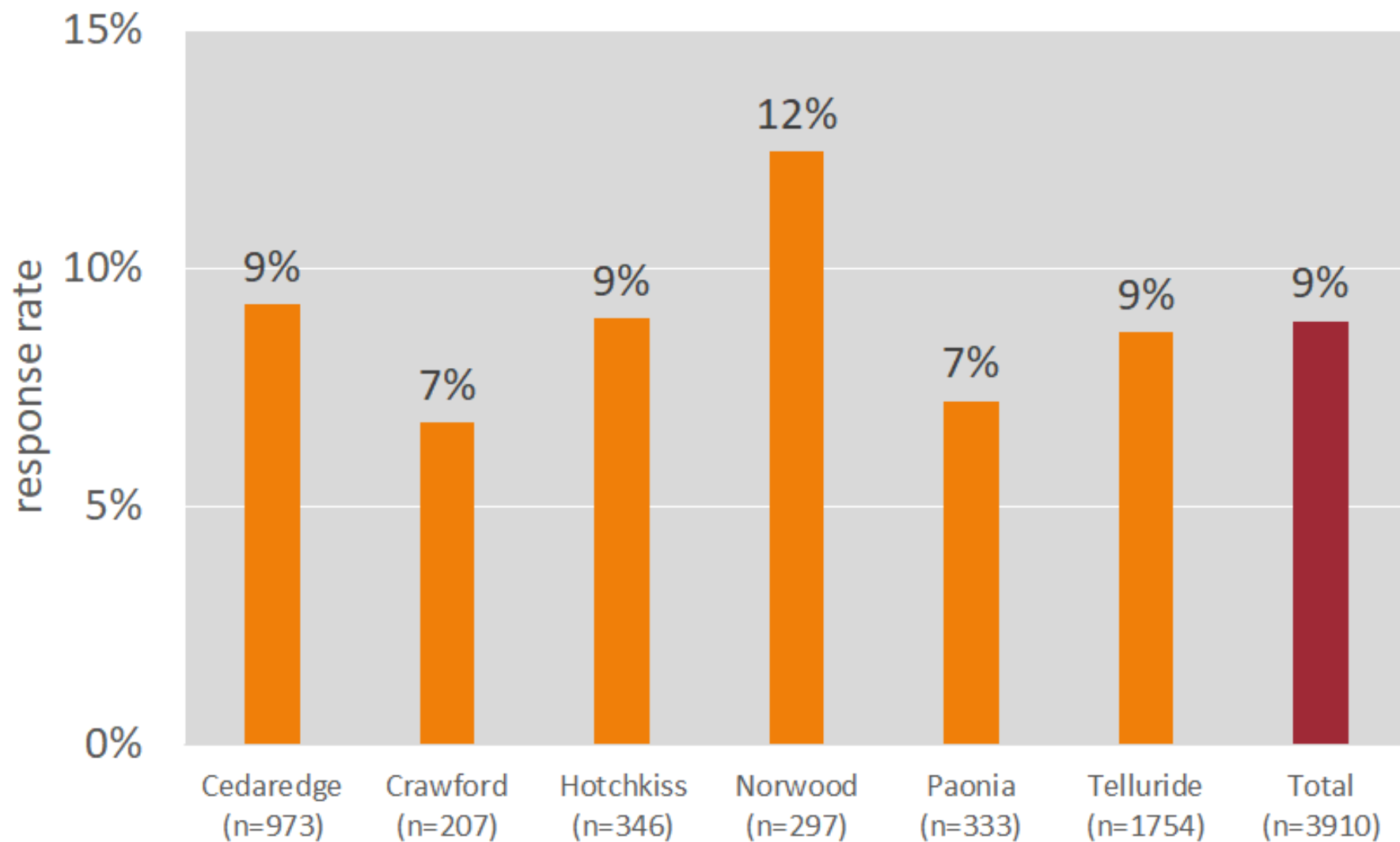
**SCHEDULE A
SITE VISIT**

<http://www.cowildfire.org/site-visit/>

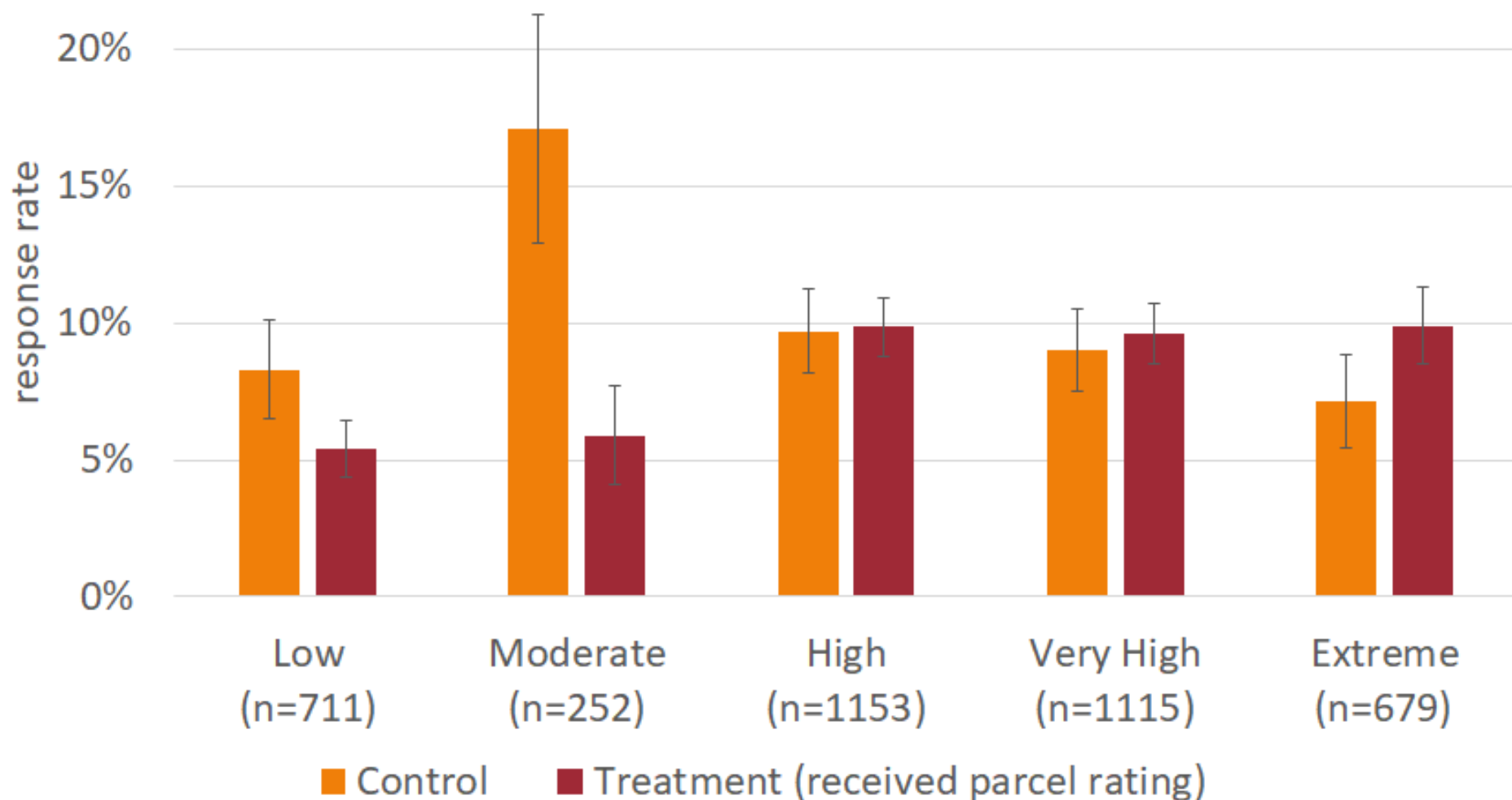
Print this page

Copyright © 2016 West Region Wildfire Council
102 Par Place, Suite #1 | Montrose, CO 81401 | P: 970-615-7300 | Email: info@cowildfire.org

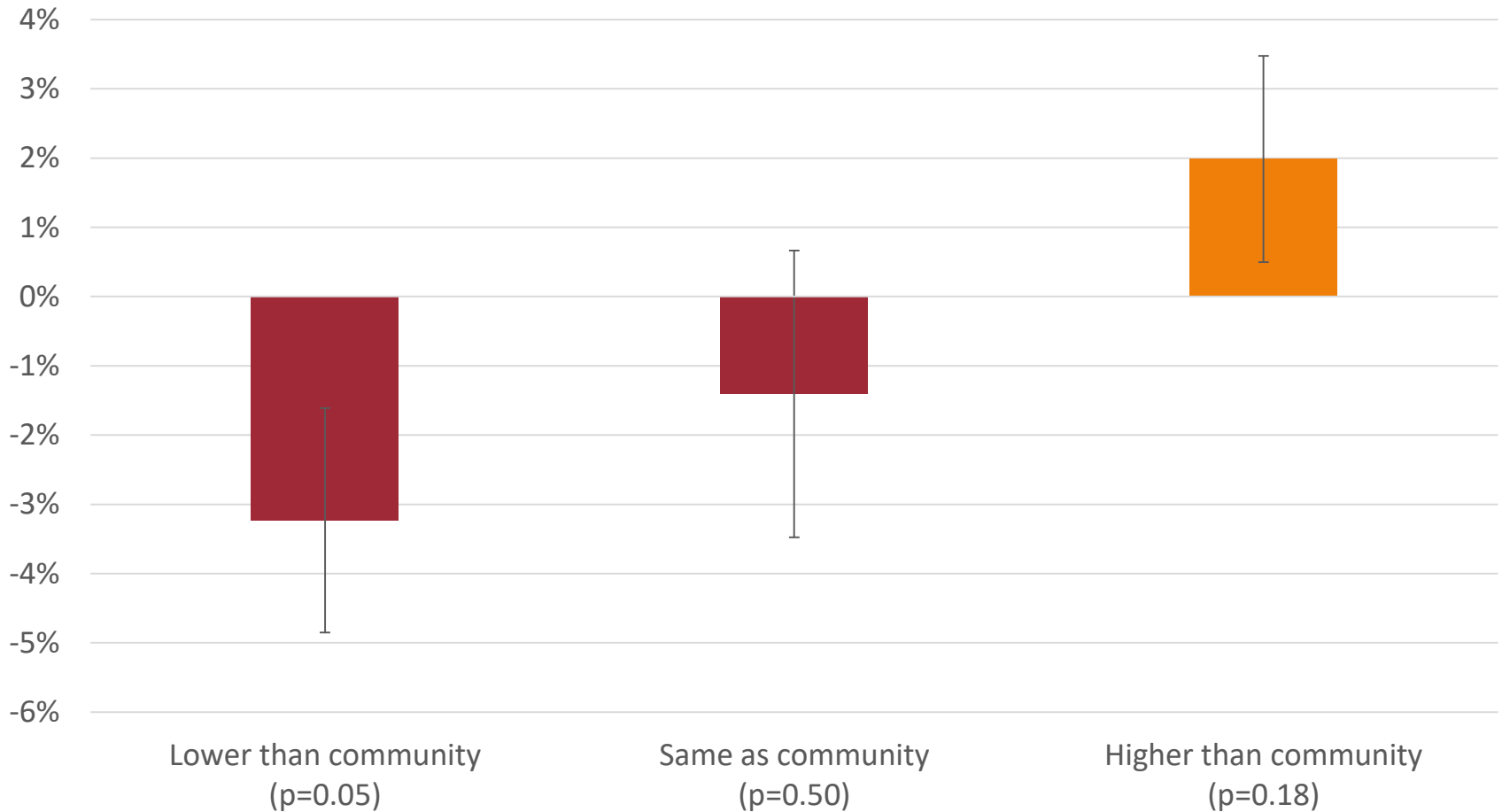
Response rate by community (FPD)



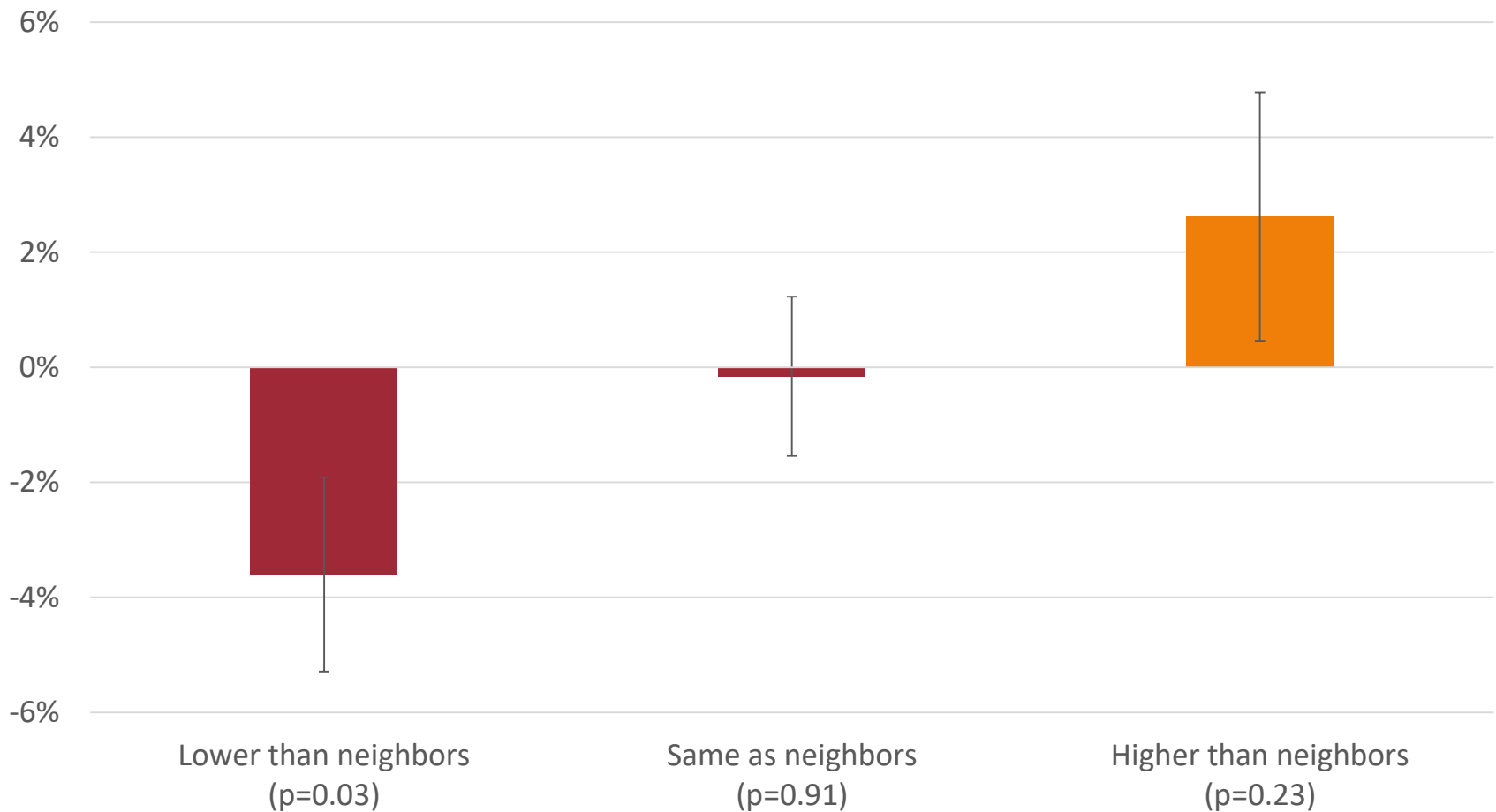
Giving residents their parcel rating has different effects for different rating levels



Self vs Community. Difference in response between treatment and control groups in percentage points; error bars depict standard error of difference. P-values in parentheses reflect two-tailed two-sample tests with equal variances.



Self vs Neighbors. Difference in response between treatment and control groups in percentage points; error bars depict standard error of difference. P-values in parentheses reflect two-tailed two-sample t-tests with equal variances.



Lessons learned

- Need experimental design to understand “optimal” communication strategy
- Response overwhelmed practitioner partners
 - Good problem to have but still a problem if not prepared
- Response to nudge depends on parcel risk rating
 - Potential Lesson: Different nudges for different risk ratings
- Many practitioners are eager to give this a try
 - Presentations to practitioner audiences are given jointly by a researcher AND a practitioner
 - Researchers and practitioners both benefit from creative communication approaches overlaid with experimental designs that allow for learning (application and scholarship 😊)
- Honesty: Developed individualized websites for our experiment. We were a bit surprised by how much practitioners like them as a communication tool.